**Homework Assignment #3** *Due: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

1. Write the electron configurations for the following elements.
2. bromine 1s22s22p63s23p64s23d104p5 or [Ar] 4s23d104p5
3. strontium 1s22s22p63s23p64s23d104p55s2 or [Kr] 5s2
4. antimony 1s22s22p63s23p64s23d104p55s24d105p3 or [Kr]5s24d105p3
5. titanium 1s22s22p63s23p64s23d2 or [Ar] 4s23d2
6. Write the Lewis dot diagrams for the elements listed in #1.

http://www.hhscougars.org/ourpages/auto/2007/10/16/1192578073868/lewis%20structure%20bromine%20atom.jpghttp://edu.glogster.com/media/4/19/41/54/19415457.pnghttp://tinyjim.tripod.com/ptable/sb.gif

**Ti**

1. How many electrons occupy p orbitals in a chlorine atom?

15 1s22s22p63s23p5

**Homework Assignment #4** *Due: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

1. What is the frequency of green light, which has a wavelength of 4.90x10-7 m?

c =  c/

1. What is the speed of an electromagnetic wave that has a frequency of 7.8x106 Hz?

All waves travel at the speed of light ( no matter what kind of wave it is.

1. What is the energy of radiation with a frequency of 9.50x1013 Hz?

E=hv

1. Describe the relationship among frequency, wavelength, and energy of electromagnetic waves.

Wavelength and frequency are indirectly related. When one is high, the other is low.

Wavelength and energy are indirectly related. When one is high, the other is low.

Frequency and energy are directly related. When one is high, the other is high.